

Date: Sat, 27 Nov 93 04:30:30 PST  
From: Ham-Digital Mailing List and Newsgroup <ham-digital@ucsd.edu>  
Errors-To: Ham-Digital-Errors@UCSD.Edu  
Reply-To: Ham-Digital@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Digital Digest V93 #125  
To: Ham-Digital

Ham-Digital Digest                      Sat, 27 Nov 93                      Volume 93 : Issue 125

Today's Topics:

Any experience from delta modulation??  
ATM on Amateur Radio?

Send Replies or notes for publication to: <Ham-Digital@UCSD.Edu>  
Send subscription requests to: <Ham-Digital-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Digital Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-digital".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: Mon, 22 Nov 1993 21:03:21 GMT  
From: munnari.oz.au!spool.mu.edu!howland.reston.ans.net!cs.utexas.edu!bcm!aio!  
usenet@network.ucsd.edu  
Subject: Any experience from delta modulation??  
To: ham-digital@ucsd.edu

NASA uses delta modulation on the shuttle... it runs at 24 or 32 kbps...  
It sounds reasonable well (as you've probably heard)... It is also very  
forgiving to noise and bit errors. If you have a good link or FEC, I would  
suspect that other forms of encoding are better suited to ham radio.  
Possibly something like they use in the STU-III secure telephone units.  
I think this is Linear Predictive Coding or something like that... Those units  
operate as low as 300 bps but sound much better at 2400 bps or higher.

In article <1993Sep22.224319.8415@krk.fi> lakki@krk.fi (Erik Finskas) writes:  
>

>Have anyone tried delta modulation for digital communication?? Motorola  
>has a codec for Slope delta modulation, which can handle low bit rates,  
>and is especially designed for them.  
>All e-mail appreciated.

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>/Erik
>--
>E R I K   F I N S K A S           OH2LAK
>-----
>InterNet:      Erik.Finskas@krk.fi      R      A
>              Lakki@krk.fi             RADIO AMATEUR
>              Lakki@cute.cute.fi        D      HAM   A
>Amateur Packet: OH2LAK@OH2RBJ.FIN.EU    I      T   RADIO
>-----                                O      E      I
>              U      O
>  H   A   M       R   A   D   I   O      R
>    T   H   E   R   E   A   L   T   H   I   N   G

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Date: Wed, 24 Nov 1993 21:47:29 GMT
From: ucsnews!sol.ctr.columbia.edu!howland.reston.ans.net!cs.utexas.edu!utnut!
torn!nott!cunews!news@network.ucsd.edu
Subject: ATM on Amateur Radio?
To: ham-digital@ucsd.edu

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Karl writes:

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>I think the major issue here is where you are going to find this
>bandwidth not already occupied at least in part by amateurs on other
>modes. The AT&T announcement was a greatly REDUCED bandwidth from the
>normal tens of MB required for ATM. Right now the hams get upset when
>a few kHz disappear, so don't expect a hero's welcome when you announce
>that you need room for a 26 MB data stream to replace 1200 baud packet,
>and therefore are taking over ALL of the 430-450 band (minus the NOAA
>Doppler Radar window, of course!) for the first test system. Let's find
>ways to work in narrower BWs, since the bands aren't growing in the same
>fashion as cable or fiber bandwidths. It's sort of like telling Microsoft
>that disks are shrinking, not growing, so Word 6 has to take 30% LESS on
>the hard drive than the previous version. A terribly radical thought, do
>more with less, like we've been hearing from business for several years
>now.

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First off there is nothing saying that Amateur Radio ATM will need 26 Mbps, or anything on that order to do something usefull.

The telco standards people are looking to map ATM cells onto T1 carriers right now, and when that is done there is talk that they'll map ATM cells onto DS0's too!

Secondly there could be some interesting benefits to a Ham implementation of ATM. Can you imagine a data standard that could pass both voice, data and video with appropriate handling? Like not delaying or ARQing the voice (voice is perfectly good with BERs of  $10^{-4}$ ), ensuring that

voice and image are synchronized. File transfers that can use full bandwidth for short durations, when necessary. Character mode data that allows you to use things like visual editors over the network.

With Ham ATM, maybe in a few years all this antique FM and congestion on the 2m & 70cm band would be alleviated allowing more BW for cool things like all the satellites that will be put up in the future!

Expand your mind abit further and imagine an ATM switch on the Phase 4 Ham satellite, to switch your packets quickly over to the beam on europe, to download the latest version of GRINOS, while simultaneously enjoying a ragchew with a group of VK's in the outback, through the beam pointed towards Aus.

I think the big benefit of something like ATM will be integrating voice and data in the ham world!

im

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| This space for rent.  
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End of Ham-Digital Digest V93 #125

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